

Report to:
Jay Rector



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Practical Solutions for a Better Tomorrow

Analytical Report

IKAV Energy Inc.

Project Name: BHD TESTING SOUTH

Work Order: E310096

Job Number: 20095-0001

Received: 10/13/2023

Revision: 1

Report Reviewed By:

Walter Hinchman
Laboratory Director
10/20/23

5796 U.S. Hwy 64
Farmington, NM 87401

Phone: (505) 632-1881
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.
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Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.

Date Reported: 10/20/23



Jay Rector
1199 Main Ave. Suite 242
Durango, CO 81301

Project Name: BHD TESTING SOUTH
Workorder: E310096
Date Received: 10/13/2023 10:15:00AM

Jay Rector,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 10/13/2023 10:15:00AM, under the Project Name: BHD TESTING SOUTH.

The analytical test results summarized in this report with the Project Name: BHD TESTING SOUTH apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

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Table of Contents

Title Page	1
Cover Page	2
Table of Contents	3
Sample Summary	4
Sample Data	5
NEIL LS 003	5
QC Summary Data	6
QC - Wet Chem/Gravimetric by SM2540C	6
QC - Wet Chemistry by 9040C/4500H+B	7
QC - Wet Chemistry by SM2320B	8
QC - Wet Chemistry by 9050A/2510B	9
QC - Dissolved Metals by EPA 6010C	10
QC - Anions by EPA 300.0/9056A	11
Definitions and Notes	12
Chain of Custody etc.	13

Sample Summary

IKAV Energy Inc. 1199 Main Ave. Suite 242 Durango CO, 81301	Project Name:	BHD TESTING SOUTH	Reported: 10/20/23 14:15
	Project Number:	20095-0001	
	Project Manager:	Jay Rector	

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
NEIL LS 003	E310096-01A	Aqueous	10/13/23	10/13/23	Poly 500mL



Sample Data

IKAV Energy Inc. 1199 Main Ave. Suite 242 Durango CO, 81301	Project Name: BHD TESTING SOUTH Project Number: 20095-0001 Project Manager: Jay Rector	Reported: 10/20/2023 2:15:30PM
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NEIL LS 003

E310096-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Wet Chem/Gravimetric by SM2540C	mg/L	mg/L	Analyst: RAS	Batch: 2341090		
Total Dissolved Solids	14000	50.0	1	10/12/23	10/20/23	
Wet Chemistry by 9040C/4500H+B	pH Units	pH Units	Analyst: BA	Batch: 2342082		
pH @25°C	8.87		1	10/19/23 10:06	10/19/23 11:55	H5
Wet Chemistry by SM2320B	mg/L	mg/L	Analyst: KH	Batch: 2342048		
Total Alkalinity (as CaCO ₃ at pH 4.5)	20.0	10.0	1	10/18/23	10/18/23	
Wet Chemistry by 9050A/2510B	uS/cm	uS/cm	Analyst: BA	Batch: 2342083		
Specific Conductance (@ 25 C)	14100	10.0	1	10/19/23	10/19/23	
Dissolved Metals by EPA 6010C	mg/L	mg/L	Analyst: RKS	Batch: 2342037		
Calcium	204	100	100	10/17/23	10/19/23	
Iron	ND	2.00	1	10/17/23	10/19/23	
Magnesium	1.26	1.00	1	10/17/23	10/19/23	
Potassium	14.1	1.00	1	10/17/23	10/19/23	
Sodium	3700	200	100	10/17/23	10/19/23	
Sodium Absorption Ratio (CALC)	71.0		1	10/20/23	10/20/23	
Anions by EPA 300.0/9056A	mg/L	mg/L	Analyst: IY	Batch: 2341114		
Fluoride	49.9	25.0	100	10/13/23	10/13/23	
Chloride	1600	200	100	10/13/23	10/13/23	
Nitrite-N	ND	25.0	100	10/13/23 12:20	10/13/23 22:16	
Nitrate-N	ND	25.0	100	10/13/23 12:20	10/13/23 22:16	
o-Phosphate-P	ND	25.0	100	10/13/23 12:20	10/13/23 22:16	
Sulfate	6900	200	100	10/13/23	10/13/23	



QC Summary Data

IKAV Energy Inc. 1199 Main Ave. Suite 242 Durango CO, 81301	Project Name:	BHD TESTING SOUTH	Reported: 10/20/2023 2:15:30PM
	Project Number:	20095-0001	
	Project Manager:	Jay Rector	

Wet Chem/Gravimetric by SM2540C

Analyst: RAS

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/L	mg/L	mg/L	mg/L	%	%	%	%	

Blank (2341090-BLK1)					Prepared: 10/12/23 Analyzed: 10/20/23				
Total Dissolved Solids	ND	10.0							
LCS (2341090-BS1)					Prepared: 10/12/23 Analyzed: 10/20/23				
Total Dissolved Solids	88.0	10.0	100		88.0	55-134			
Duplicate (2341090-DUP1)					Source: E310084-10		Prepared: 10/12/23 Analyzed: 10/20/23		
Total Dissolved Solids	964	10.0		1040			7.87	5	R3



QC Summary Data

IKAV Energy Inc. 1199 Main Ave. Suite 242 Durango CO, 81301	Project Name:	BHD TESTING SOUTH	Reported: 10/20/2023 2:15:30PM
	Project Number:	20095-0001	
	Project Manager:	Jay Rector	

Wet Chemistry by 9040C/4500H+B

Analyst: BA

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	pH Units	pH Units	pH Units	pH Units	%	%	%	%	

LCS (2342082-BS1)					Prepared: 10/19/23 Analyzed: 10/19/23				
pH	8.00		8.00		100	98.75-101.25			
Duplicate (2342082-DUP1)					Source: E310096-01		Prepared: 10/19/23 Analyzed: 10/19/23		
pH	9.00			8.87		1.45	20		



QC Summary Data

IKAV Energy Inc. 1199 Main Ave. Suite 242 Durango CO, 81301	Project Name:	BHD TESTING SOUTH	Reported: 10/20/2023 2:15:30PM
	Project Number:	20095-0001	
	Project Manager:	Jay Rector	

Wet Chemistry by SM2320B

Analyst: KH

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/L	mg/L	mg/L	mg/L	%	%	%	%	

LCS (2342048-BS1)					Prepared: 10/18/23 Analyzed: 10/18/23				
Total Alkalinity (as CaCO3 at pH 4.5)	253	10.0	250		101	70-130			
Duplicate (2342048-DUP1)					Source: E310096-01		Prepared: 10/18/23 Analyzed: 10/18/23		
Total Alkalinity (as CaCO3 at pH 4.5)	24.0	10.0		20.0		18.2	20		



QC Summary Data

IKAV Energy Inc. 1199 Main Ave. Suite 242 Durango CO, 81301	Project Name:	BHD TESTING SOUTH	Reported: 10/20/2023 2:15:30PM
	Project Number:	20095-0001	
	Project Manager:	Jay Rector	

Wet Chemistry by 9050A/2510B

Analyst: BA

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	uS/cm	uS/cm	uS/cm	uS/cm	%	%	%	%	

Blank (2342083-BLK1)					Prepared: 10/19/23 Analyzed: 10/19/23				
Specific Conductance (@ 25 C)	ND	10.0							
LCS (2342083-BS1)					Prepared: 10/19/23 Analyzed: 10/19/23				
Specific Conductance (@ 25 C)	1410	10.0	1410		100	98-102			
Duplicate (2342083-DUP1)					Source: E310096-01		Prepared: 10/19/23 Analyzed: 10/19/23		
Specific Conductance (@ 25 C)	13800	10.0		14100			2.36	20	



QC Summary Data

IKAV Energy Inc. 1199 Main Ave. Suite 242 Durango CO, 81301	Project Name:	BHD TESTING SOUTH	Reported: 10/20/2023 2:15:30PM
	Project Number:	20095-0001	
	Project Manager:	Jay Rector	

Dissolved Metals by EPA 6010C

Analyst: RKS

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/L	mg/L	mg/L	mg/L	%	%	%	%	

Blank (2342037-BLK1)

Prepared: 10/17/23 Analyzed: 10/17/23

Calcium	ND	1.00							
Iron	ND	2.00							
Magnesium	ND	1.00							
Potassium	ND	1.00							
Sodium	ND	2.00							

LCS (2342037-BS1)

Prepared: 10/17/23 Analyzed: 10/19/23

Calcium	53.5	1.00	50.0		107	80-120			
Iron	112	2.00	100		112	80-120			
Magnesium	53.8	1.00	50.0		108	80-120			
Potassium	5.65	1.00	5.00		113	80-120			
Sodium	20.0	2.00	20.0		99.9	80-120			

Matrix Spike (2342037-MS1)

Source: E310096-01

Prepared: 10/17/23 Analyzed: 10/19/23

Calcium	255	100	50.0	204	102	75-125			
Iron	117	2.00	100	ND	117	75-125			
Magnesium	61.6	1.00	50.0	1.26	121	75-125			
Potassium	22.8	1.00	5.00	14.1	174	75-125			M2
Sodium	3710	200	20.0	3700	60.0	75-125			M4

Matrix Spike Dup (2342037-MSD1)

Source: E310096-01

Prepared: 10/17/23 Analyzed: 10/19/23

Calcium	260	100	50.0	204	113	75-125	2.10	20	
Iron	101	2.00	100	ND	101	75-125	14.0	20	
Magnesium	64.5	1.00	50.0	1.26	126	75-125	4.52	20	M2
Potassium	22.3	1.00	5.00	14.1	164	75-125	2.17	20	M2
Sodium	3760	200	20.0	3700	320	75-125	1.39	20	M4



QC Summary Data

IKAV Energy Inc. 1199 Main Ave. Suite 242 Durango CO, 81301	Project Name:	BHD TESTING SOUTH	Reported: 10/20/2023 2:15:30PM
	Project Number:	20095-0001	
	Project Manager:	Jay Rector	

Anions by EPA 300.0/9056A

Analyst: IY

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/L	mg/L	mg/L	mg/L	%	%	%	%	

Blank (2341114-BLK1)

Prepared: 10/13/23 Analyzed: 10/13/23

Fluoride	ND	0.250
Chloride	ND	2.00
Nitrite-N	ND	0.250
Nitrate-N	ND	0.250
o-Phosphate-P	ND	0.250
Sulfate	ND	2.00

LCS (2341114-BS1)

Prepared: 10/13/23 Analyzed: 10/14/23

Fluoride	2.49	0.250	2.50	99.7	90-110
Chloride	25.6	2.00	25.0	102	90-110
Nitrite-N	2.41	0.250	2.50	96.3	90-110
Nitrate-N	2.45	0.250	2.50	97.8	90-110
o-Phosphate-P	11.8	0.250	12.5	94.1	90-110
Sulfate	23.7	2.00	25.0	94.8	90-110

LCS Dup (2341114-BSD1)

Prepared: 10/13/23 Analyzed: 10/14/23

Fluoride	2.56	0.250	2.50	102	90-110	2.64	20
Chloride	27.1	2.00	25.0	108	90-110	5.67	20
Nitrite-N	2.50	0.250	2.50	100	90-110	3.72	20
Nitrate-N	2.53	0.250	2.50	101	90-110	3.47	20
o-Phosphate-P	12.1	0.250	12.5	97.0	90-110	3.06	20
Sulfate	24.5	2.00	25.0	98.1	90-110	3.45	20

QC Summary Report Comment:

Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



Definitions and Notes

IKAV Energy Inc. 1199 Main Ave. Suite 242 Durango CO, 81301	Project Name:	BHD TESTING SOUTH	Reported: 10/20/23 14:15
	Project Number:	20095-0001	
	Project Manager:	Jay Rector	

H5 pH is specified to be performed in the field within 15 minutes of sampling. The sample analysis was performed as quickly as possible.

M2 Matrix spike recovery was outside quality control limits. The associated LCS spike recovery was acceptable.

M4 Matrix spike recovery value is suspect since the analyte concentration in the sample is disproportionate to the spike level. The associated LCS spike recovery was acceptable.

R3 The RPD exceeded the acceptance limit. LCS spike recovery met acceptance criteria.

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

RPD Relative Percent Difference

DNI Did Not Ignite

DNR Did not react with the addition of acid or base.

Note (1): Methods marked with ** are non-accredited methods.

Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.



Released to Imaging: 11/7/2023 12:17:30 PM

Envirotech Analytical Laboratory

Printed: 10/13/2023 10:25:58AM

Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	IKAV Energy Inc.	Date Received:	10/13/23 10:15	Work Order ID:	E310096
Phone:	505-793-2834	Date Logged In:	10/13/23 10:24	Logged In By:	Caitlin Mars
Email:	jeremiah.rector@ikavenergy.com	Due Date:	10/20/23 17:00 (5 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
5. Were all samples received within holding time? Yes

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: M.ChambleeComments/ResolutionSample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:
 - Sample ID? Yes
 - Date/Time Collected? Yes
 - Collectors name? Yes

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? Yes

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: na

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.

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1625 N. French Dr., Hobbs, NM 88240
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Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 283154

CONDITIONS

Operator: SIMCOE LLC 1199 Main Ave., Suite 101 Durango, CO 81301	OGRID: 329736
	Action Number: 283154
	Action Type: [C-103] Sub. General Sundry (C-103Z)

CONDITIONS

Created By	Condition	Condition Date
mkuehling	TDS 14000 - produced water	11/7/2023